



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,928	08/04/2003	Keigo Maki	P/2850-81	4958
7590 02/25/2008				
Attention: Robert C. Faber				
OSTROLENK, FABER, GERB & SOFFEN				
1180 Avenue of the Americas				
New York, NY 10036-8403				
EXAMINER				
MACARTHUR, SYLVIA				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
02/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/633,928

Applicant(s)

MAKI, KEIGO

Examiner

Sylvia R. MacArthur

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 5-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 3 and 5-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/003)
Paper No(s)/Mail Date 5/29/2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/6/2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 3-8 have been considered but are moot in view of the new ground(s) of rejection. It is noted that the prior art of Konishi et al fails to teach an inner electrode and bonding agent layer as recited in the remarks pages 6-8. New rejections are recited below.

Claim Rejections - 35 USC § 103

3. Claims 1, 3, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi (JP 2001-313331, using the Computer Generated English Translation) in view of Kanno et al (US 6,677,167) and Harada et al (US 6,771,483).

Regarding claims 1 and 3: The prior art of Hiroshi teaches an electrostatic attraction device, see Fig. 4 for example.

The susceptor device 1 comprises a ceramic base body 3 having a first main surface which serves for mounting a plate sample thereon; and a second main surface; an inner electrode 7 which is disposed on the second main surface of the ceramic base body; an electricity supplying terminal 9 which is connected to the inner electrode electrically; an insulating sprayed layer 8, formed by a sprayed ceramic, which covers the inner

Art Unit: 1792

electrode, a connecting section of the inner electrode and the electricity supplying terminal; a temperature controlling section 2 which is disposed beneath the insulating sprayed layer and has flow paths 10 inside of the temperature controlling section for circulating a medium for controlling the temperature of the medium and the insulating sprayed layer and the bonding agent layer are sealed from the outside, wherein the insulating sprayed layer and the temperature controlling section are attached via a bonding agent layer 5; the ceramic base body and the temperature controlling section are formed unitarily.

The prior art of Hiroshi fails to teach a) the insulating sprayed layer having a thickness in a range of 20 to 500 micrometers, b) a convex fitting section disposed on a peripheral section on either one of the ceramic base body or the temperature controlling section; and c) a concave fitting section disposed on a peripheral section of the ceramic base body or the temperature controlling section so that the convex fitting section and the concave fitting section engage together.

The prior art of Kanno et al teaches a convex part and concave part on the peripheral section of the ceramic base body, see silicon ring 32 and (stepped shape on edge of susceptor) 76. The motivation to modify the apparatus of Hiroshi to provide the convex concave configuration of Kanno et al is as a way for the ring to mate with susceptor. The motivation to provide the ring 32 is that it acts as a focus ring to ensure that the treatment is uniform along the surface of the wafer see col. 12 lines 36-51. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide the focus ring of Kanno et al on the periphery of the susceptor of Hiroshi.

The prior art of Kanno et al further teaches a wafer processing apparatus, see for example Fig.13 wherein an insulating layer has a thickness of 1mm formed by spray coating see col.3 lines 27-37, but fails to teach the claimed range of thickness.

The prior art of Harada et al teaches an electrostatic chuck with a thickness of 100-500 micrometers see col. 3 lines 26-33. The motivation to modify the apparatus Hiroshi to have the insulation layer 8 of the claimed thickness is that this layer must to dense and of the optimal dimension to ensure that the properties of electric insulating, corrosion resistance and resistance to plasma erosion are effective, see col.5 lines 1-27.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to combine the teachings of Kanno et al and Harada et al in order to provide the susceptor device of the claimed invention.

Regarding claim 5: This claim is interpreted as a product by process claim in that the method used to create the sprayed layer does not structurally limit the layer. The layer of Hiroshi as modified by Kanno et al and Hirada et al could have been created by plasma jet spray.

Regarding claim 6: See [0021] of Hiroshi.

Regarding claims 7-9: See Fig. 4 of Hiroshi and the rejection of claim 1 above.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-Th during the hours of 8 a.m. and 4:30 p.m..

Art Unit: 1792

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sylvia R MacArthur/
Primary Examiner, Art Unit 1792

February 18, 2008